AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-6 (canceled).

7. (previously presented): A control device for motor generator characterized by comprising a motor generator having a stator with an armature winding wound thereon and a rotor of claw-pole shape with a field winding wound thereon, an inverter unit that sends and receives electric power to and from the armature winding, a field circuit that controls a field current flowing through the field winding, and a control circuit that controls the inverter unit and the field circuit, wherein an engine is started and power generation is performed while a vehicle is running,

wherein a field current limit value Ifm in electric driving to start the engine is larger than a field current limit value Ifg in power generation,

in the power generation, an inverter mode in a low rotation speed zone for boosting and an alternator mode in a high rotation speed zone for rectifying and outputting a generated voltage without boosting are provided,

a field current limit value Ifgi in the inverter-mode power generation and a field current limit value Ifga in the alternator-mode power generation are set differently from each other, and

the larger value is set as the value Ifg.

8. (currently amended): The control device for motor generator as claimed in claim 7, wherein in the alternator-mode power generation, the field current limit value Ifga ~~in the alternator-mode power generation~~ is set to be equal to or larger than the field current limit value Ifgi ~~in the inverter-mode power generation~~, and the field current limit value Ifga in the alternator-mode power generation is set as the field current limit value Ifg in the power generation.

9. (currently amended): The control device for motor generator as claimed in claim 7, wherein in the inverter-mode power generation, the field current limit value Ifgi ~~in the inverter-mode power generation~~ is set to be equal to or larger than the field current limit value Ifga ~~in the alternator-mode power generation~~, and the field current limit value Ifgi in the inverter-mode power generation is set as the field current limit value Ifg in the power generation.

10. (previously presented): The control device for motor generator as claimed in claim 7, characterized in that the field current limit value at the time of maximum power

generation in the inverter-mode power generation in a low rotation speed zone for boosting is expressed as Ifgi, and the value Ifgi is a function of rotation speed, and

a speed zone is provided such that a field current Ifgip in the case where the quantity of power generation at each rotation speed is smaller than the maximum quantity of power generation at the rotation speed is smaller than Ifgi.

11. (previously presented): The control device for motor generator as claimed in claim 7, wherein the low rotation speed zone for boosting includes a zone where boosting is not carried out at the time of low load, and a field current in this case is equal to or larger than the field current limit value Ifga in the alternator-mode power generation.

12. (previously presented): The control device for motor generator as claimed in claim 7, wherein the rotor of claw-pole shape has a field-supplementing permanent magnet.

13. (previously presented): The control device for motor generator as claimed in claim 8, characterized in that the field current limit value at the time of maximum power generation in the inverter-mode power generation in a low rotation speed zone for boosting is expressed as Ifgi, and the value Ifgi is a function of rotation speed, and

a speed zone is provided such that a field current Ifgip in the case where the quantity of power generation at each rotation speed is smaller than the maximum quantity of power generation at the rotation speed is smaller than Ifgi.

14. (previously presented): The control device for motor generator as claimed in claim 8, wherein the rotor of claw-pole shape has a field-supplementing permanent magnet.

15. (previously presented): The control device for motor generator as claimed in claim 9, characterized in that the field current limit value at the time of maximum power generation in the inverter-mode power generation in a low rotation speed zone for boosting is expressed as Ifgi, and the value Ifgi is a function of rotation speed, and

a speed zone is provided such that a field current Ifgip in the case where the quantity of power generation at each rotation speed is smaller than the maximum quantity of power generation at the rotation speed is smaller than Ifgi.

16. (previously presented): The control device for motor generator as claimed in claim 9, wherein the low rotation speed zone for boosting includes a zone where boosting is not carried out at the time of low load, and a field current in this case is equal to or larger than the field current limit value Ifga in the alternator-mode power generation.

17. (previously presented): The control device for motor generator as claimed in claim 9, wherein the rotor of claw-pole shape has a field-supplementing permanent magnet.

18. (new): The control device for motor generator as claimed in claim 7, wherein the larger value of the Ifgi and Ifga values within each mode of the power generation is set as the value Ifg.

19. (new): The control device for motor generator as claimed in claim 7, wherein, in each mode of the power generation, the value Ifgi and the value Ifga are provided, the control circuit compares the values Ifgi and Ifga to obtain a larger value of the two, and the control circuit sets the larger value of the two to the value Ifg.